

2000 Year in Review

Columbia/Snake System Operations

Technical Management Team

Report to the IT

November 1, 2000

Nov 1999 - Feb 2000

- TMT expanded to year-round coverage
- BON flows managed for chum spawning and incubation at Ives and Pierce Islands, to implement 2000 Supplemental BiOp
- BON flows reached:
 - 125 kcfs on 5 October
 - 140 kcfs on 9 November
 - 160 kcfs on 18 November

March

- Shifted flood control from Dworshak to Grand Coulee:
65 ksfd
- Bonneville spilled March 9 - 16 for Spring Creek Hatchery release -- spill managed to downstream TDG levels and depth over chum redds.

April

- Runoff began early with an unexpected freshet.
- The highest observed flow was 375 kcfs on April 23 (as measured at The Dalles).

Maximum Spring Flood Control Evacuation

	<i>expected</i>	<i>observed</i>	<i>max. draft date</i>
– Libby March 30	2331.3	2337	March 23
– Hungry Horse April 30	3503.2	3507.4	April 4
– Grand Coulee April 30	1239.6	1243.4	May 19
• (shifted 65 ksfd) April 1	1270.2	1263.1	
– Dworshak April 15	1483.9	1522.3	March 18
• (unshifted) April 1	1512.2		
• (shifted 65 ksfd) April 1		1522.2	
– Brownlee April 30	2056.2	2055.9	June 26

May

- May started with “meet the flow” operations, as long as possible
- The month ended with refill operations
- Used Dworshak to meet 100 kcfs at Lower Granite through May 12 when refill began
- Used Grand Coulee to meet 260 kcfs at McNary through May 19 (drafting to elevation 1233.9, 5.7 feet below flood control needs). Refill began May 20

June

- Used reservoirs to attempt to refill, then meet the flow
 - Dworshak refilled to elevation 1598.6 feet (1.4 feet down)
 - Grand Coulee refilled to elevation 1279 feet (11 feet down)
 - McNary observed flow was 206 kcfs in June
 - Hungry Horse refilled to elevation 3558.3 feet (1.7 feet down)
 - Libby refilled to elevation 2418.1 feet (40.9 feet down)
 - Libby supplied 25 kcfs for 17 days, June 12 - 29, for hatchery fry
- Spring season average flows were 85 kcfs at Lower Granite, 157 kcfs at Priest Rapids, and 243 kcfs at McNary

July

- Used Dworshak to the maximum extent possible (up to 13.5 kcfs). July ended at 1566.4 feet
 - Average flow at Lower Granite was 37.8 kcfs
- Grand Coulee filled only to elevation 1286 feet on July 16. July ended at elevation 1284.1 feet
 - Average flow at McNary was 166.7 kcfs
- Dworshak discharge limited, no TDG waiver; operated to not exceed 110% instantaneous. Summer flow aug. began July 7, when Lower Granite forebay water temp. $> 68.0^{\circ}$ F.
- McNary unit 1 & 2 water temp. test conducted

August

- The shape of flow in August was the primary topic of discussion
- System was used to meet west coast power needs
- All projects drafted to interim draft limits, except Libby which ended August at elevation 2434.9 feet (24.1 feet down from full)
- Summer season average flows were 35 kcfs at Lower Granite and 156 kcfs at McNary

Power System Emergencies

- 26 June -- WNP2 off line. TDA spill reduced to 30%, MCN units operated outside 1% of best efficiency. (2:00 to 7:00 p.m. 26 June)
- 31 July - 3 Aug -- CA ISO stage 3 alerts + GCL fire. LWG July 30 at noon to Aug 2 at 1700 and JDA raised above MOP, JDA spill delayed 1 hr., Albeni Falls & Hungry Horse generation increased.
- 9 Aug -- MT line outage, forest fires. TDA spill reduced to 30%.
- 21 Aug -- appeared to be insufficient resources in NW. TDA spill reduced to 30%, BON spill reduced to 50 kcfs, DWR discharge dropped to 10 kcfs (spill stopped).

Power System Emerg's. (cont'd)

- All summer 2000 deviations were driven by reliability concerns, and were consistent with '95 BiOp exclusion language.
- Prioritized lists of actions were developed and updated in coordination with TMT (except 9 Aug event).
- Current prioritized list dated 24 August 2000, avail. on TMT web page.
- Winter 2000/'01 emergencies are possible, due to continued tight load/resource balance in the West.

Fish Review

- The median timing of the Snake River fall chinook was early this year
- Generally the fish runs were longer this year